

AMENDMENT TO THE CLAIMS

Listing of Claims

1-8 (Withdrawn)

Please amend claims 9 and 14 as follows:

9. (Currently amended) A method for fabricating a balloon catheter stent deployment system, the method comprising:

providing a balloon catheter comprising

an inner tubular shaft disposed within an outer tubular shaft, the inner and outer shafts each having proximal and distal ends, the distal end of the inner shaft extending distally beyond the distal end of the outer shaft, and

an inflatable balloon having a proximal end attached to the outer shaft near the distal end thereof and a distal end attached to the inner shaft near the distal end thereof;

placing a stent over the balloon so that a distal end of the stent is disposed proximally to the distal end of the balloon leaving a distal section of the balloon uncovered by the stent and a proximal end of the stent is spaced distally from the proximal end of the balloon leaving a proximal section of the balloon uncovered by the stent,

crimping the stent onto the balloon to leave the stent with initial outer diameter, placing a stepped enclosure over the stent and balloon wherein the stepped enclosure comprising a first section having a first inner diameter and that is connected to a second section having a second inner diameter, the first inner diameter being greater than or ~~equal to~~ the second inner diameter, the second inner diameter being greater than the initial outer diameter of the stent but in close approximation thereto, the second section of the stepped enclosure being ~~at least as long as~~ longer the stent, and wherein the first section of the stepped enclosure is disposed over the proximal section of the balloon and the second section of the stepped enclosure is disposed over the stent and the distal section of the balloon,

inflating the balloon so that the proximal section of the balloon inflates and engages the first section of the stepped enclosure and the stent and a portion of the balloon

disposed beneath the stent and the distal section of the balloon distally of the stent are prevented from substantial expansion by the second section of the stepped enclosure, and the maximum outer diameter of the distal section of the balloon is no greater than the initial outer diameter of the stent,

removing the balloon and stent from the stepped enclosure.

10. (Original) The method of claim 9 further comprising:
inserting a protective sleeve over the stent after removing the balloon and stent from the stepped enclosure.

11. (Original) The method of claim 9 further comprising:
inserting a protective sleeve over the balloon catheter to a position proximal to the stent and balloon before placing the stent over the balloon, and sliding the protective sleeve over the stent after removing the stepped tube.

12. (Previously presented) The method of claim 9 wherein the first section of the stepped enclosure comprises a flared proximal end and the second section of the stepped enclosure comprises a flared distal end.

13. (Original) The method of claim 9 wherein the stepped enclosure is a stepped tube and the second section of the stepped tube extends into the first section of the stepped tube to provide an overlap section between the first and second sections.

14. (Currently Amended) The method of claim 9 wherein the stepped enclosure ~~[[I]]~~ is formed by a plurality of crimping elements each having a stepped leading edge to form the stepped enclosure and wherein the plurality of crimping elements are movable between crimping and retracted positions

15 (Original) The method of claim 14 wherein the plurality of crimping elements comprise part of a crimping device capable of heating the stent and balloon during the crimping of the stent onto the balloon.

16 (Original) The method of claim 9 wherein the crimping further comprises heating the stent and balloon to a temperature ranging from about 50 to about 85°C.

17 (Original) The method of claim 9 wherein the crimping further comprises heating the stent and balloon to a temperature of about 65°C.

18 (Original) The method of claim 9 wherein the inflating further comprises inflating the balloon with a gas having a temperature ranging from about 40 to about 60°C.

19 (Original) The method of claim 9 wherein the inflating further comprises pressurizing the balloon to an internal pressure ranging from about 30 to about 75 psi for a time period ranging from about 5 seconds to about 1 minute.

20 (Original) The method of claim 9 wherein the inflating further comprises inflating the balloon with a gas having a temperature ranging from about 40 to about 60°C and pressurizing the balloon to an internal pressure ranging from about 30 to about 75 psi for a time period ranging from about 5 seconds to about 1 minute

21-30. (Withdrawn)